

REMARKS

This is a full and timely response to the outstanding final Office Action mailed on April 15, 2009 (Paper No. 20090412). Upon entry of this response, claims 2-11, 13-14, 18, 20-22, 24-25, 29-43, 45-54, and 56-72 are pending in the application. Claims 14, 18, 20-21, 30, 50, 52-53, and 63-72 are allowed. In this response, claims 2, 22, 31, 37, 45-47, 49, 51, and 54 have been amended and claims 12, 26-28, 44, 55 have been canceled. Applicants respectfully request that the amendments being filed herewith be entered and request reconsideration and allowance of all pending claims.

I. Claim Objections

Claims 51 and 54 have been objected to for various informalities. The Office Action alleges on page 3 that “‘the sub-band’ and should be ‘the sub-band of the received signal’”. Claims 51 and 54 have been amended according to the Examiner’s suggestion. Therefore, Applicants respectfully submit that the objection has been overcome and requests that the objection be withdrawn.

II. Claim Rejections under 35 U.S.C. §112, Second Paragraph

Claims 37-48 have been rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Specifically, the Office Action alleges that:

Claim 37, lines 6-13, the claimed subject matter of “the control program configured to: negotiate ...; determine ...; and request ...” is indefinite because a control program is software and itself could not perform functions of the negotiating, determining; and requesting without a computer or processor, such as the CPU recited in line 4 of the claim.

Claim 46 (line 3) and claim 47 (line 4), the term “the determining and requesting steps” lacks antecedent basis since the precedent claim 37 is an apparatus claim, which recites a DSL modem.

Claim 37 has been amended to include "the control program configured to, when executed by the CPU: negotiate..." Claims 46 and 47 have been amended to include "the control program is further configured to repeat... determining a signal-to-noise-ratio and requesting an adjustment until..." In view of the amendments, Applicants submit that claims 37-48 define the invention in the manner required by 35 U.S.C. § 112. Accordingly Applicants respectfully request that the rejection be withdrawn.

III. Claim Rejections under 35 U.S.C. §103(a)

Claims 2-4, 6, 9-12, 22, 24, 26, 28-35, 37-38, 41-42, 46-47, 57-58, and 61 have been rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over *Goldstein* (U.S. Patent No. 5,265,151, hereafter "*Goldstein*") in view of *Gultekin et al.* (U.S. Patent No. 6,215,793, hereafter "*Gultekin*"). Claims 8 and 60 have been rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over *Goldstein* in view of *Gultekin* in further view of *Betts et al.* (U.S. Patent No. 5,682,378, hereafter "*Betts*"). Claims 13, 48, and 62 have been rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over *Goldstein* in view of *Gultekin* in further view of *Archibald et al.* (U.S. Patent No. 5,369,703, hereafter "*Archibald*"). Applicants respectfully traverse these rejections as applied to pending claims 2-4, 6, 8-13, and 37-40.

It is well established at law that, for a proper rejection of a claim under 35 U.S.C. §103 as being obvious based upon a combination of references, the cited combination of references must disclose, teach, or suggest (either implicitly or explicitly) all elements/features/steps of the claim at issue. See, e.g., *In re Dow Chemical*, 5 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1988); *In re Keller*, 208 U.S.P.Q.2d 871, 881 (C.C.P.A. 1981). As has been acknowledged by the Court of Appeals for the Federal Circuit, the U.S. Patent and Trademark Office ("USPTO") has the burden under 35 U.S.C. § 103 to establish obviousness by showing objective teachings in the prior art or generally available knowledge of one of ordinary skill in the art that would lead that individual to the claimed invention. *In re Fine*, 837 F.2d 1071, 1074, 5 U.S.P.Q. 2d 1596, 1598

(Fed. Cir. 1988). The key to supporting an allegation of obviousness under 35 U.S.C. § 103 is the clear articulation of the reasons why the Examiner believes that claimed invention would have been obvious. See MPEP § 2141. As stated by the Supreme Court, "[R]ejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *KSR Int'l Co. v. Teleflex Inc. (KSR)*, 550 U.S. 398, 418, 82 USPQ2d 1385, 1396 (quoting *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006)) (2007).

A. Independent Claim 2

Applicants' amended claim 2 provides as follows (emphasis added):

A method of adjusting transmit performance parameters over a digital subscriber line (DSL), the method performed in a first DSL modem, the method comprising the steps of:

negotiating, with a second DSL modem, a limiting value of a first performance parameter, ***the received signal comprising a plurality of sub-bands, each sub-band transmitted at a respective transmit power level;***

receiving, from the second DSL modem, a signal exhibiting the first performance parameter;

determining a signal-to-noise-ratio for a sub-band of the received signal; and

requesting, from the second DSL modem, an adjustment in a second performance parameter associated with the sub-band of the received signal, wherein the second performance parameter is different from the first performance parameter.

Claim 2 has been amended to include the features of allowable claim 27 and intermediate claims 12 and 26, which are recited and emphasized above. Applicants respectfully submit that the amendments are such that no new search is required. Claims 12 and 26-27 have been canceled without prejudice, waiver, or disclaimer. Applicants respectfully submit that independent claim 2 is allowable for at least the reason that *Goldstein* in view of *Gultekin* fails to disclose, teach or suggest all of the features recited in amended claim 2. Thus, Applicants respectfully request that the rejection of claim 2 be withdrawn.

B. Dependent Claims 3-4, 6, 9-12, 26, and 29

Since independent claim 2 is allowable, Applicants respectfully submit that claims 3-4, 6, 9-11, and 29 are allowable for at least the reason that each depends from an allowable claim. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q. 2d 1596, 1598 (Fed. Cir.1988). Claims 12 and 26 have been canceled thereby rendering their rejection moot. Therefore, Applicants respectfully request that the rejection of claims 3-4, 6, 9-11, and 29 be withdrawn.

C. Independent Claim 22

Applicants' amended claim 22 provides as follows (emphasis added):

A system for adjusting transmit performance parameters over a digital subscriber line (DSL) comprising:

means for negotiating, with a DSL modem, a maximum value for a first performance parameter,

means for receiving, from the DSL modem, a signal exhibiting the first performance parameter, wherein the means for receiving comprises means for receiving a signal comprising a plurality of sub-bands, each sub-band transmitted at a respective transmit power level;

means for determining a signal-to-noise-ratio for the received signal;
and

means for requesting, from the DSL modem, an adjustment in a second performance parameter associated with the received signal, wherein the second performance parameter is different from the first performance parameter.

Claim 22 has been amended to include the features of allowable claim 55 and intermediate claim 28, which is recited and emphasized above. Applicants respectfully submit that the amendment is such that no new search is required. Claims 28 and 55 have been canceled without prejudice, waiver, or disclaimer. Applicants respectfully submit that independent claim 22 is allowable for at least the reason that *Goldstein* in view of *Gultekin* fails to disclose, teach or suggest all of the features recited in amended claim 22. Thus, Applicants respectfully request that the rejection of claim 22 be withdrawn.

D. Dependent Claims 24, 28, and 56

Since independent claim 22 is allowable, Applicants respectfully submit that claims 24 and 56 are allowable for at least the reason that each depends from an allowable claim. *In re*

Fine, 837 F.2d 1071, 5 U.S.P.Q. 2d 1596, 1598 (Fed. Cir.1988). Claim 28 has been canceled thereby rendering its rejection moot. Therefore, Applicants respectfully request that the rejection of claims 24, 28, and 56 be withdrawn.

E. Independent Claim 31

Applicants' amended claim 31 provides as follows (emphasis added):

A method of adjusting transmit performance parameters over a digital subscriber line (DSL), the method performed in a first DSL modem, the method comprising the steps of:

negotiating, with a second DSL modem, a maximum value for a first performance parameter,

receiving, from the second DSL modem, a signal exhibiting the first performance parameter, wherein the received signal comprises a plurality of sub-bands, each sub-band transmitted at a respective transmit power level;

determining a signal-to-noise-ratio for the received signal; and

requesting, from the second DSL modem, an adjustment in a second performance parameter associated with the received signal, wherein the second performance parameter is different from the first performance parameter.

Claim 22 has been amended to include the feature of "negotiating, with a second DSL modem, a maximum value for a first performance parameter", which is recited and emphasized above. Applicants respectfully submit that the amendment is such that no new search is required. Applicants respectfully submit that independent claim 31 is allowable for at least the reason that *Goldstein* in view of *Gultekin* fails to disclose, teach or suggest at least the feature of "negotiating, with a second DSL modem, a maximum value for a first performance parameter" recited in amended claim 31. Thus, Applicants respectfully request that the rejection of claim 31 be withdrawn.

F. Dependent Claims 32-35, 57-58, and 61

Since independent claim 31 is allowable, Applicants respectfully submit that claims 32-35, 57-58, and 61 are allowable for at least the reason that each depends from an allowable claim. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q. 2d 1596, 1598 (Fed. Cir.1988). Therefore, Applicants respectfully request that the rejection of claims 32-35, 57-58, and 61 be withdrawn.

G. Independent Claim 37

Applicants' amended claim 37 provides as follows (emphasis added):

A receiving digital subscriber line (DSL) modem comprising:
a demodulator in communication with a DSL;
a memory;
a central processing unit (CPU) in communication with the demodulator and the memory; and
a control program stored in the memory, the control program configured to, when executed by the CPU:
negotiate, with a transmitting DSL modem, a limiting value of a first performance parameter;
determine a signal-to-noise-ratio for a signal received from the transmitting DSL modem, the signal exhibiting the first performance parameter; and
request, from the transmitting DSL modem, an adjustment in a second performance parameter associated with the received signal,
wherein the second performance parameter is transmit data rate,
wherein the second performance parameter is different from the first performance parameter.

Claim 37 has been amended to include the features of allowable claim 44, which is recited and emphasized above. Applicants respectfully submit that the amendment is such that no new search is required. Claim 44 has been canceled without prejudice, waiver, or disclaimer. Applicants respectfully submit that independent claim 37 is allowable for at least the reason that *Goldstein* in view of *Gultekin* fails to disclose, teach or suggest all of the features recited in amended claim 37. Thus, Applicants respectfully request that the rejection of claim 37 be withdrawn.

H. Dependent Claims 38, 41-43, and 46-47

Since independent claim 37 is allowable, Applicants respectfully submit that claims 38, 41-43, and 46-47 are allowable for at least the reason that each depends from an allowable claim. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q. 2d 1596, 1598 (Fed. Cir.1988). Therefore, Applicants respectfully request that the rejection of claims 38, 41-43, and 46-47 be withdrawn.

I. Dependent Claim 8

For the reasons discussed in section III.A above, *Goldstein* in view of *Gultekin* fails to disclose, teach or suggest all of the features recited in amended claim 2. The addition of *Betts* does not cure the deficiencies of *Goldstein* and *Gultekin*. Because independent claim 2 is allowable over *Goldstein* in view of *Gultekin* in further view of *Betts*, Applicants respectfully submit that claim 8 is allowable for at least the reason that it depends from an allowable claim. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q. 2d 1596, 1598 (Fed. Cir. 1988). Therefore, Applicants respectfully request that the rejection of claim 8 be withdrawn.

J. Dependent Claim 60

For the reasons discussed in section III.E above, *Goldstein* in view of *Gultekin* fails to disclose, teach or suggest all of the features recited in amended claim 31. The addition of *Betts* does not cure the deficiencies of *Goldstein* and *Gultekin*. Because independent claim 31 is allowable over *Goldstein* in view of *Gultekin* in further view of *Betts*, Applicants respectfully submit that claim 60 is allowable for at least the reason that it depends from an allowable claim. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q. 2d 1596, 1598 (Fed. Cir. 1988). Therefore, Applicants respectfully request that the rejection of claim 60 be withdrawn.

K. Dependent Claim 13

For the reasons discussed in section III.A above, *Goldstein* in view of *Gultekin* fails to disclose, teach or suggest all of the features recited in amended claim 2. The addition of *Archibald* does not cure the deficiencies of *Goldstein* and *Gultekin*. Because independent claim 2 is allowable over *Goldstein* in view of *Gultekin* in further view of *Archibald*, Applicants respectfully submit that claim 13 is allowable for at least the reason that it depends from an allowable claim. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q. 2d 1596, 1598 (Fed. Cir. 1988). Therefore, Applicants respectfully request that the rejection of claim 13 be withdrawn.

L. Dependent Claim 48

For the reasons discussed in section III.G above, *Goldstein* in view of *Gultekin* fails to disclose, teach or suggest all of the features recited in amended claim 37. The addition of *Archibald* does not cure the deficiencies of *Goldstein* and *Gultekin*. Because independent claim 37 is allowable over *Goldstein* in view of *Gultekin* in further view of *Archibald*, Applicants respectfully submit that claim 48 is allowable for at least the reason that it depends from an allowable claim. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q. 2d 1596, 1598 (Fed. Cir. 1988). Therefore, Applicants respectfully request that the rejection of claim 48 be withdrawn.

M. Dependent Claim 62

For the reasons discussed in section III.E above, *Goldstein* in view of *Gultekin* fails to disclose, teach or suggest all of the features recited in amended claim 31. The addition of *Archibald* does not cure the deficiencies of *Goldstein* and *Gultekin*. Because independent claim 31 is allowable over *Goldstein* in view of *Gultekin* in further view of *Archibald*, Applicants respectfully submit that claim 62 is allowable for at least the reason that it depends from an allowable claim. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q. 2d 1596, 1598 (Fed. Cir. 1988). Therefore, Applicants respectfully request that the rejection of claim 62 be withdrawn.

IV. Allowable Subject Matter

Applicants thank the Examiner for allowance of claims 14, 18, 20-21, 30, 50, 52-53, and 63-72, as noted on page 11 of the Office Action. In addition, Applicants acknowledge the Examiner's conclusions that the claims 5, 7, 25, 27, 36, 49, 51, 54-55, and 59 would be allowable if rewritten in independent form and/or rewritten to overcome the objections set forth in the Office Action. Applicants also acknowledge the Examiner's conclusions that the claims 39-40 and 44-45 would be allowable if rewritten to overcome the rejection under 35 U.S.C. 112, second paragraph, set forth in the Office Action and in independent form. Claims 2, 22, 31, and 37 have been amended accordingly. Since independent claims 2, 22, 31, and 37 are allowable,

Applicants respectfully submit that claims 5, 7, 25, 36, 39-40, 45, 49, 51, 54, and 59 are allowable for at least the reason that it depends from an allowable claim. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q. 2d 1596, 1598 (Fed. Cir. 1988).

CONCLUSION

Applicants respectfully request that all outstanding objections and rejections be withdrawn and that this application and presently pending claims 2-11, 13-14, 18, 20-22, 24-25, 29-43, 45-54, and 56-72 be allowed to issue. Any statements in the Office Action that are not explicitly addressed herein are not intended to be admitted. In addition, any and all findings of inherency are traversed as not having been shown to be necessarily present. Furthermore, any and all findings of well-known art and official notice, or statements interpreted similarly, should not be considered well known since the Office Action does not include specific factual findings predicated on sound technical and scientific reasoning to support such conclusions. If the Examiner has any questions or comments regarding Applicants' response, the Examiner is encouraged to telephone Applicants' undersigned counsel.

Respectfully submitted,

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